No. 14-1135

In the
United States Court of Appeals for the Federal Circuit

CARDSOFT (ASSIGNMENT FOR THE BENEFIT OF CREDITORS), LLC,

Plaintiff-Appellee,

– v. –

VERIFONE, INC., HYPERCOM CORPORATION,
VERIFONE SYSTEMS INC.,

Defendants-Appellants,

and

INGENICO S.A., INGENICO CORP., INGENICO INC., WAY SYSTEMS, INC.,

Defendants.

On Appeal from the United States District Court for the Eastern District of Texas, Case No. 08-CV-00098, Hon. Roy S. Payne & Hon. Chad Everingham, M.JJ.

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CERTIFICATE OF INTEREST

The undersigned attorney represents Plaintiff-Appellee CardSoft (Assignment for the Benefit of Creditors), LLC ("CardSoft"), which is the named party and the real party-in-interest in this appeal. CardSoft has no parent corporation, and no publicly-held corporation owns 10 percent or more of CardSoft's stock.

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SUMMARY

In *Teva Pharmaceuticals USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831 (2015), the Supreme Court held that "the appellate court must apply a 'clear error', and not a *de novo*, standard of review" to a "trial judge's resolution of an underlying factual dispute" regarding the construction of a patent claim term. *Id*. at 836. In particular, a district court's finding of "the meaning of a term in the relevant art during the relevant time period" "must be reviewed for clear error on appeal." *Id.* at 841.

In this case, the claim construction dispute centered on whether a "virtual machine" must "process instructions expressed in a hardware/operating system-independent language" in order to provide portability to previously incompatible computers (hereinafter "the independent language requirement"). *CardSoft LLC v. VeriFone, Inc.*, 769 F.3d 1114, 1117 (Fed. Cir. 2014). Both parties relied on intrinsic evidence and submitted competing extrinsic evidence as proof of the meaning. Indeed, the district court expressly acknowledged that it considered the extrinsic evidence. *See* A16669-70 ("COURT: I read his deposition. I understand. . . I read it."). After weighing the extrinsic evidence that supported VeriFone's[1] alleged conventional meaning of the disputed term, the district court rejected the independent language requirement. This evidentiary determination underpins the

[1] In this brief, CardSoft refers to defendants/appellants as VeriFone.

district court's claim construction. Determining conventional understandings in the relevant art at the relevant time is exactly the type of "evidentiary underpinnings" to which *Teva* speaks.

In its entirely *de novo* determination, the Court admitted and considered new extrinsic evidence, and re-weighed the evidentiary determinations of the district court. *CardSoft*, 769 F.3d at 1118. The Court's *de novo* analysis lead the Court to reverse the district court's claim construction "because the district court erred by failing to give 'virtual machine' its ordinary and customary meaning." *Id.* at 1117. In so doing, the Court did not find the district court's construction clearly erroneous, but rather, that it was "correct, but incomplete." *Id.* The Court proceeded to "complete" the district court's construction by supplementing it with the Court's own factual determinations, drawn from extrinsic evidence that the Court admitted and weighed in the first instance, regarding the operation of a JAVA virtual machine in 1996. *Id.* at 1118-19. The Court then supplemented the admittedly "correct" district court construction by adding the independent language requirement in order to provide portability to previously incompatible computers. *Id*. at 1117-18. This Court erred, however, because portability was already included in the district court's construction that the virtual machine "is emulatable in different computers having incompatible hardware or operating systems" – a construction that was not appealed by VeriFone. By adding the independent

language requirement to the "virtual machine" term, the Court invaded the province of the district court's fact-finder role in determining both what a conventional virtual machine was in 1996 and whether the claimed invention of the CardSoft patents was so limited.

Under the deferential standard articulated in *Teva*, this Court is not free to alter a "correct" claim construction, even if this Court feels that it could have fashioned a more "complete" construction had it considered the evidence and conducted the analysis in the first instance. Accordingly, the district court's construction must be affirmed.

ARGUMENT

I. THE CONVENTIONAL MEANING OF THE TERM "VIRTUAL MACHINE" IS A FACTUAL UNDERPINNING THAT REQUIRES DEFERENCE UNDER *TEVA*

A. *Teva* precludes this Court from substituting its own analysis for that of the district court.

Teva explains that some claim construction disputes venture beyond the patent's intrinsic evidence, presenting the district court with extrinsic evidence regarding the background science or the meaning of a term in the relevant art during the relevant time period. *Teva*, 135 S. Ct. at 834. In such cases, the district court will need to make subsidiary factual findings about that evidence, its persuasiveness, and what (if anything) it teaches about the disputed claim terms. *Id.*

Crediting one side's factual explanation for the meaning of a term despite the other side's proffered expert testimony to the contrary is an evidentiary rejection of the losing side's expert testimony, which constitutes a subsidiary factual finding. *Id*. at 843 ("The District Court credited Teva's expert's account, thereby rejecting Sandoz's expert's explanation. The District Court's finding about this matter was a factual finding. . ."") (internal cites omitted). In the event that such subsidiary factual findings are "dispositive[, it] does not render the subsidiary question a legal one." *Id.* at 842.

This Court's reversal is contrary to *Teva* in two respects. First, no deference was given to the district court's consideration of the extrinsic evidence in construing the term "virtual machine." Second, it vitiated the district court's construction of the limitation that the virtual machine "is emulatable in different computers having incompatible hardware or operating systems" (hereinafter, the "emulatable limitation"). This Court erred in failing to recognize that the district court's construction of the emulatable limitation provided the "portability" feature that the Court found was missing from the district court's construction of "virtual machine," something VeriFone never disputed or asked this Court to review.

Here, the factual question about the capabilities, requirements or limitations of a JAVA virtual machine, and whether a JAVA virtual machine defined a "conventional" virtual machine in the understanding of one of skill in the art, have

become virtually dispositive of the ultimate claim construction issue. Without importing extrinsic limitations from the JAVA virtual machine, there was no support for VeriFone's proposed construction, or this Court's adoption thereof. The district court determined that the intrinsic evidence overwhelmingly favored CardSoft's proposed construction, meaning that the district court would have had to find the extrinsic evidence exceptionally compelling to deviate from the intrinsic evidence. It did not. A16669-93.

The construction that VeriFone proposed to this Court on appeal relied on a complete reweighing of the extrinsic evidence, as well as newly-offered extrinsic evidence. The Court's *de novo* review conducted that very reweighing of extrinsic evidence, including the consideration of the new extrinsic evidence not before the district court. *See CardSoft*, 769 F.3d at 1117-19 (citing, as new extrinsic evidence, the facts of *Oracle Am., Inc. v. Google Inc.*, 750 F.3d 1339, 1348 (Fed. Cir. 2014), *Nazomi Communs., Inc. v. Nokia Corp.*, 739 F.3d 1339, 1340 (Fed. Cir. 2014); and *Nazomi Commc'ns, Inc. v. ARM Holdings, PLC*, 403 F.3d 1364, 1366 (Fed. Cir. 2005)). The Court found that extrinsic evidence—namely evidence about the capabilities of the JAVA virtual machine—to be dispositive of the claim construction dispute, crediting that evidence over the wealth of intrinsic evidence to the contrary. *See Id.* at 1117-19 (citing "the intrinsic and extrinsic evidence" and tying the dispositive JAVA virtual machine "extrinsic evidence" to the

disputed term though the prosecution history's contrast of the claimed invention to a "conventional" virtual machine).

This Court no longer has the prerogative to admit and weigh the evidence in that context. *Teva*, 135 S. Ct. at 842. The acceptance or rejection of the extrinsic evidence regarding the JAVA virtual machine does not "lose its factual character" and render that subsidiary question a legal one simply because the district court and this Court might reach opposite conclusions based entirely on their differing interpretations of that extrinsic evidence.

Teva thus precludes the *de novo* treatment of extrinsic evidence regarding the JAVA virtual machine that formed the basis for this Court's prior opinion in this case. Without that *de novo* review, there is no basis on which to deviate from the district court's construction.

B. The district court considered and weighed extrinsic evidence in rejecting VeriFone's proposed construction.

The district court considered both intrinsic and extrinsic evidence in construing the term "virtual machine." *See* A 1209-10; A 1219; A 16669-70; A 16637-38; A 16689-91; A 1169. Specifically, CardSoft offered the district court extrinsic evidence in the form of an explanation from the inventor as to the conventional capabilities of a "virtual machine." *See* A 1169 ("as explained by the inventor of the patents-in suit at his deposition, one skilled in this art understands that software for a virtual machine is usually compiled (or translated) into a

language understood by the operating system of the device"). Both CardSoft and VeriFone discussed with the district court various extrinsic examples of virtual machines and their operation during a fact-intensive *Markman* hearing. *See* A 16637-38; A 1000-01.

VeriFone submitted what it identified as "expert witness testimony" in support of its proposed construction, obtained during VeriFone's deposition of one of CardSoft's witnesses. *See* A1187 ("Plaintiff's expert recognized that virtual machine . . . covers only an interpretive message processor and cannot cover a directly cod[ing] [i.e., native or machine code] message processor."); A1188 ("Plaintiff's expert still concluded that the claim construction cannot be so broad as to include the virtual machine's being complied directly to the native code of the microprocessor."). VeriFone also submitted examples of the patentee's publications as further extrinsic evidence of the conventional usage of the term "virtual machine." A1219.

To the extent that the meaning of the term "virtual machine" turns on what one of skill in the art would understand a conventional virtual machine to be, that is a question of fact that the district court has resolved in favor of CardSoft. *See, e.g.*, A16662-16665 (addressing the prosecution history statements in which the inventor distinguished his invention from a conventional virtual machine, and discussing the evidence relevant to determining what one of ordinary skill in the art

would understand that conventional virtual machine to be). This Court can only reverse that determination and reevaluate the boundaries of a conventional virtual machine if the district court's rejection of VeriFone's extrinsic evidence in favor of the definition provided in the specification was clearly erroneous. It was not.

II. THE DISTRICT COURT'S CONSTRUCTION OF THE TERM "VIRTUAL MACHINE" IS NOT CLEARLY ERRONEOUS

A. The district court did not clearly err in rejecting the extrinsic evidence in favor of the overwhelming intrinsic evidence.

The district court's construction gives preference to the definition in the specification, as *Phillips* directs. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (*en banc*) ("the inventor's lexicography governs"). In the common specification of the asserted patents, the patentee expressly defined a virtual machine as a "computer programmed to emulate a hypothetical computer," (A116, Col. 3:40-41), also noting that "[d]ifferent incompatible computers may be programmed to emulate the same hypothetical computer." (A116, Col. 3:41-42). Giving greatest weight to the inventor's own lexicography—thereby rejecting extrinsic evidence purportedly supporting a deviation from that express definition—was not clearly erroneous on the part of the district court.

The district court's construction was not purely dependent on the intrinsic evidence; the district court considered, and its construction was consistent with, CardSoft's extrinsic evidence. It was, nonetheless, consistent with all of the

intrinsic evidence of record. For instance, the district court found that the virtual machine was not separate from the applications running on the virtual machine, because the asserted claim in which that term appears explicitly recites that the virtual machine *includes* the instructions running on it. A45-46; *see Pfizer, Inc. v. Teva Pharm., USA, Inc.*, 429 F.3d 1364, 1373 (Fed. Cir. 2005) (explaining that claims should be construed to be "internally consistent").

The district court's construction also gives meaning to the remaining limitations of the asserted claim in a way that VeriFone's construction does not. Importantly, the asserted claim specifically recites, in a subsequent limitation, that the virtual machine "is emulatable in different computers having incompatible hardwares or operating systems." After consideration of both intrinsic and extrinsic evidence, the district court construed this limitation to mean "capable of executing programs on different computers having incompatible hardware or operating systems." A 51. The emulatable limitation is the crux of what captures the portability and versatility of the invention[2], yet VeriFone chose not to appeal this construction, and thus it was not considered by the Court. Instead, VeriFone tries to shoehorn this portability aspect of the invention into the construction of

[2] The emulatable limitation was specifically added by CardSoft during prosecution of the '945 Patent with the argument that as claimed it "provides an improved virtual machine that is portable and that is not dependent on the presence of particular hardware." A18876.

"virtual machine" by improperly proposing to add the independent language requirement. This attempt by VeriFone was rejected by the district court, and is not clearly erroneous. By adding this independent language requirement, the Court rendered the emulatable limitation—as construed by the district court—moot. When viewed together with the construction of the emulatable limitation, the district court's construction of virtual machine is indeed correct, and complete.

Furthermore, VeriFone and the Court's construction eviscerates dependent claims 7 and 8, which allow the virtual machine instructions to be implemented in software code *not* dependent on the hardware (i.e. including hardware-***in***dependent). The district court recognized these consequences, and did not clearly err in finding that VeriFone's extrinsic evidence regarding the features of the JAVA virtual machine was not persuasive enough to overcome the strong presumption embodied in the doctrine of claim differentiation. *See Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 910 (Fed. Cir. 2004) (recognizing that the doctrine of claim differentiation it at its strongest when dependent claims would be mooted or contradicted); *Wenger Mfg., Inc. v. Coating Mach. Sys., Inc.*, 239 F.3d 1225, 1233 (Fed. Cir. 2001). The Court's only rationale to violate claim differentiation is a single sentence where it relies on the "ordinary meaning of 'virtual machine'"—a meaning determined by extrinsic evidence. *CardSoft*, 769 F.3d at 1119.

The Court's construction limits the applicability of the asserted claims to the sole scenario of an application that is only written in a virtual machine language that is incompatible with (independent of) *any* computer. The district court's construction captures this scenario, as well as the scenario of an application that is written in a language that is compatible with one computer but can also be run on other, incompatible computers.[3] A construction that captures both scenarios is consistent with CardSoft's extrinsic evidence that the virtual machine must *be able to* process instructions written in hardware or operating system-independent language, but is not limited to processing *only* those kinds of instructions.

The district court did not clearly err in crediting CardSoft's extrinsic evidence over VeriFone's. The district court further did not clearly err in finding that extrinsic evidence suggesting that conventional virtual machines are limited to running instructions in a hardware or operating system-independent language was not sufficiently persuasive to overcome the intrinsic evidence, including the inventor's own lexicography, a consistent reading of the claims themselves, the doctrine of claim differentiation, and statements in the specification contemplating instructions written in a hardware-dependent language.

[3] At trial, CardSoft presented unrebutted evidence that VeriFone's accused products, based on the VERIFONE PORTING GUIDE (Exhibit 174), run the same application on incompatible computers, proving the portability of the applications as required by the district court's claim construction. A17823-27.

B. The prosecution history does not provide a mechanism for the Court to consider extrinsic evidence without deference.

In addition to considering the claims and the specification, the district court fully examined the prosecution history of the patents. During prosecution, the inventor made clear that a JAVA virtual machine was an example of a conventional virtual machine, and that his inventive virtual machine was "not conventional." *See, e.g.,* A16662-65 (addressing the prosecution history statements in which the inventor distinguished his invention from a conventional virtual machine, and discussing the evidence relevant to determining what one of ordinary skill in the art would understand that conventional virtual machine to be). Rather, in describing some of the characteristics of his virtual machine, the inventor stated the claimed invention was "an addition" to a conventional virtual machine.

VeriFone, in an attempt to limit the claimed invention scope to the independent language requirement, submitted extrinsic evidence regarding the limitations of a JAVA virtual machine, and the understanding of those skilled in the art regarding virtual machines in general. *See* Section I.B above. After consideration of this extrinsic evidence, the district court did not find that any of the statements made by the inventor in the prosecution history mandated that any specific features of a conventional virtual machine must be included in the claimed virtual machine as urged by VeriFone. Specifically, the district court refused to

conclude that one of skill in the art would understand a virtual machine to be confined to running instructions in a hardware or operating system-independent language, even though one prior art virtual machine ran only applications written in JAVA (a hardware or operating system-independent code). A47.

The district court's construction captures the "defining feature" of the virtual machine: an ability to run an application that did not depend on any specific underlying operating system or hardware, i.e. "write once, run anywhere." *CardSoft,* 769 F.3d at 1118. That the application does not depend on any particular underlying operating system or hardware does not logically require that the application must be written in a language independent of all hardware and operating systems. The JAVA virtual machine was just one example of a known virtual machine, and the intrinsic evidence overwhelmingly refuted VeriFone's approach of confining the claims to that one example. The district court's refusal to allow extrinsic evidence of purported conventional knowledge to trump, first and foremost, a patentee's own lexicography and the overwhelming balance of the intrinsic evidence, and of equal importance extrinsic evidence to the contrary, is not clearly erroneous.

A linguistic hook in the prosecution history, such as the applicant's characterization of the JAVA virtual machine as "conventional" does not provide a mechanism for a properly deferential appellate court to consider extrinsic evidence

in the first instance where factual disputes about the scope of a conventional virtual machine were decided below.

CONCLUSION

This Court should affirm the claim construction of the district court and the resulting judgment of infringement in favor of CardSoft.

Dated: August 24, 2015

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

I certify that the foregoing complies with the typeface and volume limits of the rules of this Court and the Court's Briefing Order on Remand. The Brief was prepared using monospaced Times New Roman 14 point font and is less than 14 pages in length.

Dated: August 24, 2015

Respectfully submitted,

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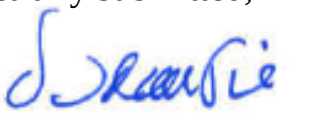
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CERTIFICATE OF SERVICE

The foregoing was electronically filed with the Clerk of the Court for the U.S. Court of Appeals for the Federal Circuit by using the appellate CM/ECF system on August 24, 2015. All participants in the case are registered CM/ECF users and that service will be accomplished by the appellate CM/ECF system.

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